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ABSTRACT

Four background papers prepared for an assembly on industry/education cooperation and a summary of discussions and recommendations which came out of the assembly are contained in this report. After Henry Halsted's introduction to the report and to the theme of the relationship of industry and education, Herbert E. Striner's paper, "The Joint Role of Industry and Education in Human Resource Development," is presented. Mr. Striner discusses current approaches to vocational competence in Germany, England, and Japan and their relevance to the United States. Next, Craig D. Musick, in a paper entitled "What Employees Need in Training and How to Promote Cooperation between the American Society for Training and Development, the American Association of Community and Junior Colleges, and the American Vocational Association," suggests teaching about the free enterprise system, providing environment training, strengthening basic skills, and underscoring work ethics. In "Community Colleges and Industry: A Stronger Partnership for Human Resource Development," Don C. Garrison recalls that vocational competence was a major educational goal in 1918 and asserts that it is still a challenge today. He focuses on what education offers industry and what community colleges need from industry. The Assembly report concludes the paper. (AYC)

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Employee Training For Productivity

Report of a
1980 Assembly on
Industry - Education Cooperation

Sponsored by
American Association of Community and Junior Colleges
American Society for Training and Development
American Vocational Association

in cooperation with
The Johnson Foundation
at Wingspread
Racine, Wisconsin
March 12-14, 1980

Edited by Roger Yarrington

JC 800 466

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Foreword

A study of community college cooperation with postsecondary area vocational schools, jointly sponsored by the American Association of Community and Junior Colleges (AACJC) and the American Vocational Association (AVA) was completed in 1978 with several positive results, not the least of which was increased cooperation between the two national associations.

Cooperation between AACJC and AVA has been facilitated during the past year by a joint liaison committee. It was this committee which recommended an assembly on industry-education cooperation for employee training to increase productivity.

The AACJC - AVA liaison committee invited the American Society for Training and Development (ASTD) to join in sponsorship of the assembly. ASTD members are professional directors of training and human resource development in business, industry, government, and labor unions. AACJC and AVA representatives felt it was essential that such persons be participants in planning and conducting the assembly.

The Johnson Foundation agreed to host the assembly at the Wingspread Conference Center in Racine, Wisconsin, and to contribute to publication of the background papers with the assembly report. General Motors Foundation, Inc., also contributed financial support for the publication.

Authors of the assembly background papers are:

Herbert E. Striner, dean of the College of Business Administration, American University, Washington, D.C.

Craig Musick, training director, Graniteville Company, Graniteville, South Carolina, and president of ASTD.

Don C. Garrison, president, Tri-County Technical College, Pendleton, South Carolina, and a member of the AACJC Board of Directors.

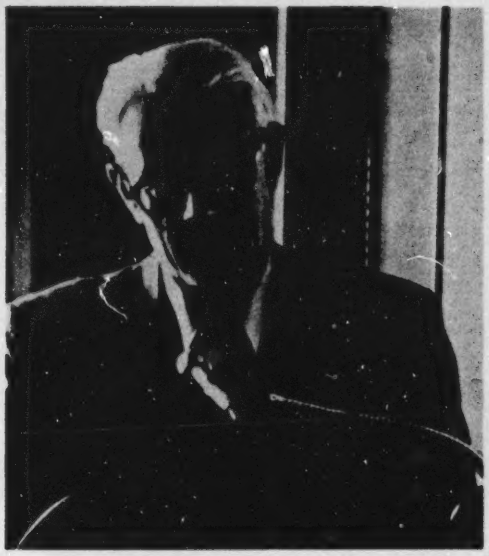
Gwen Gibson, director of public relations for ASTD, drafted a report on the assembly discussions and recommendations. The report was reviewed by assembly participants at the closing session. It appears in this publication following the background papers.

Our goal has been to produce recommendations for a national policy on human resource development. We hope these papers will be useful in that effort. The sponsoring associations will continue to work for the development of such a policy.

All of the contributions by authors, participants, and The Johnson Foundation are greatly appreciated.

Roger Yarrington
Vice President, AACJC

Introduction



Henry Halsted

Industry and education are not always allies. The relationship of education to the world of work has been debated from early times. Different societies have approached the relationship in different ways.

It was with a belief that a contribution could be made to better understanding of this relationship in the context of today's economic concerns in the United States that The Johnson Foundation joined with the American Association of Community and Junior Colleges, the American Vocational Association and the American Society for Training and Development to convene in March 1980 a meeting at Wingspread.

As Don Garrison reminds us in his paper that appears in this report, **vocational competence** was one of the seven *Cardinal Principles of Education* enunciated in the United States by the Educational Policies Commission in 1918. Realization of that principle is still a challenge today. Herbert Striner's paper discusses current approaches to vocational competence and training in Germany, England and Japan and their relevance for the United States.

The Soviet Union, too, struggles with this issue. In the 1950's, concern about industry-education cooperation led the Soviet Union to institute an extensive educational reform because, it was said, the Soviet ten-year school had become "divorced from life." The Soviet Union sought then to bring education and industry closer together by placing the students in factories for part of their secondary education and giving them direct experiences at work sites. That experiment, like others elsewhere, was short-lived in the pendulum swings of educational policy.

In the United States, cooperative education and work-study have been with us for a long time. Nevertheless, as the Carnegie Council points out in its recent report, *Giving Youth a Better Chance, Opportunities for Education, Work and Service,* there is in the United States today a serious deficiency in the avenues for effective transition into adulthood and *far* too little early contact with the world of work.

Another important concern today is economic productivity. In our society, productivity has been lagging due in part, we are told, to inadequate skills of new workers and worker attitudes that hamper effective work habits. Changing technology, management decisions and attitudes, and government policy are also part of the productivity equation.

Where do the solutions lie? The Carnegie Council's report recommends that most applied skill training be provided in community colleges where those attending can be prepared for jobs and placed in jobs on a

part-time basis while attending college. The Council's report speaks of the community colleges as a base both for providing counseling on occupational opportunities and job placements, and for organizing and arranging apprenticeship programs and other combinations of employment and classroom instruction.

Willard Wirtz, the keynote speaker at Wingspread, reiterated his proposal of some years ago that every sizeable community develop a *work-education council* to bring together school officials, representatives of employers, unions, and public agencies to coordinate cooperative programs.

In his paper, ASTD president Craig Musick contends that in point of fact colleges and industry are not working together today, but are on diverging paths. Musick's paper emphasizes four areas for attention and industry-education cooperation: 1) understanding the free enterprise system, 2) understanding the work environment, 3) preparation in the basic skills (reading, oral and written communication, math and mechanical ability) and 4) work ethics.

There is a "large communications gap" between top managers and their employees, Musick states. Both employers and employees, he contends, need to be educated about work ethics.

These comments suggest the range of considerations and views that were discussed at the Wingspread assembly by 55 representatives of industry, labor, government and education from 25 states. The assembly papers and recommendations that follow in this report should be of interest to all who are concerned with industry-education cooperation and human resource development in our society.

Henry Halsted
Vice President-Program
The Johnson Foundation

By Herbert E. Striner

The Joint Role Of Industry And Education in Human Resource Development

In this brief paper, I will seek to show how industry and education institutions can, and must, work jointly if we are to have an effective mechanism for helping to achieve two objectives, low unemployment levels and a trained work force.

The topic of this paper is not a new one. I find major sections of publications and speeches I gave back in the mid-1960's covering this crucial co-operative effort by industry and local educational institutions to deal with labor force problems. In preparing this paper, I looked back through some of these old articles and speeches. It was a horrid journey through time. It was shocking to read some of the nonsense perpetrated by the members of the President's Council of Economic Advisors concerning manpower problems. I think little has changed.

Back in 1965, the "law" was being expounded by the Council that with each increase in real GNP of 3 percent, the unemployment rate would drop by 1 percent. On page 66 of the "1962 Economic Report of the President," it was stated that the achievement of 4 percent unemployment would require a gain of about 11 percent in real GNP over the ensuing 18 months. As I noted in a paper I gave in 1965, the required growth in GNP took place, but the drop in the unemployment rate did not. At this same time, the President's Council was arguing that all that had to be done to deal with the nearly 6 percent unemployment level was increase GNP, or as it was so cleverly put, increase the size of the pie. This was taken as a contrary position to the so-called structuralists, like myself, who contended that structural change within our economy called for new approaches to the problem of unemployment. My contention then, as it is now, was that the shift from a manufacturing job-market to a service job-market, the shift from an economy which called for few high-skill jobs to an economy with a broadening base of technologically oriented jobs, and the shift of large numbers of poorly educated blacks and whites from rural areas into urban areas, called for more than just economic growth. It called for a completely new approach to education, training, job counseling and if you will, human resource development.

I have been contending since the mid-1960's that given these order-of-magnitude changes in our economy and our society, we must adopt a philosophy, supported by the necessary legislation and funds, which sees education and training throughout life as an absolutely necessary national investment in human resources development. Without such an investment strategy, we will continue to be plagued by unemployment, underemployment, low productivity and inflation. But before I discuss this basic question of a national strategy to invest

in our labor force, I want to start by stressing the basics of relating industry and education to the goal of training, employment and job information.

Permit me to quote a paragraph from a paper I gave in 1965 concerning the labor force and occupational projections. The paper was given at the 18th annual meeting of the Industrial Relations and Research Association. In commenting on the type of job-needs data manpower economists used for forecasting the types of training programs called for, I said:

To do what we have set out to do, we must leave the comfort and solace of aggregated, national data and move into the muck and mire of disaggregated, local labor market data. Fellow economists, this is where the action is! When we talk about workers, counselors, educators and employers, we are talking about Chicago, Milwaukee, Fresno, Hoboken and Tampa.

How Many Vacancies Exist?

The situation that existed in 1965 still exists. The efforts to set up meaningful education and training programs are stymied at the very outset because we do not know how many job vacancies exist at any given moment and what the job vacancy picture is for the next year or two. Unless local business firms provide such information on a current basis to our vocational schools and community colleges, I don't see how these institutions can deal with the responsibility of producing the skills needed by local employers.

The sample surveys and national estimates by the United States Department of Labor have been inadequate, and we know that. Even the Department of Labor makes no secret of it. For example, the shift in female participation rates during recent years has confounded BLS labor force projections for the period 1959 - 1976. In a recent article it was admitted that "there is no doubt that future growth in the labor force has been underestimated by BLS in the past. The BLS projections for 1975, made back in 1959, 1962, 1965, and 1970, were all below the actual 1975 level, and almost certainly, the projections for 1980 and 1985, made in 1973 and 1976, also will be lower than the actual figures for these years."[1]

In this particular situation, though female labor force participation is a primary cause, with a larger than expected growth, it is interesting to note that BLS projection methods overestimated the civilian labor force participation rates for males during this period. There is no sign of an improvement in this situation. As indicated in the article, "On the basis of actual data, it appears that BLS is once again headed for an underestimate of the female participation rate and an overestimate of the male rate in 1980. The size of the error in the overall labor force projection depends on how much the male and female errors offset one another."[2]

The reasons for this situation are not numerous, and they need not be in order for the situation to be desperate. The major culprit in this situation is "demand."

Reporting Job Vacancies

We are among the few major industrial nations in the world that do not have a national system for reporting job vacancies. We have no real sense of the true demand for people to fill jobs. It is a purely voluntary act when an employer calls the local U.S. employment office to report that the firm is looking for a mechanic, secretary, etc. The list of such a "job order" has no relationship to the number and variety of job vacancies which may exist in that same firm. Unless business firms are required to inform a local agency of what vacancies exist and what their projected skill needs are, I really don't see how we can have an effective training effort. If we are to plan on how to supply adequate education and training services, we really do have to know what the demand is now and is likely to be for some realistic future period. As such projections change, the new information must be made available to the educational institutions. For those who say this cannot be done, I would suggest they go to Germany, France, Holland, the U.K., or many other major industrial nations. They do it.

Once we have the basic information on how many jobs are open now, and what skills they call for, as well as the projected job and skill needs for a reasonable period in the future, we are confronted by the question of how do we disseminate such information. Such dissemination is not only necessary for educators but for the unemployed as well.

We are among the few major industrial nations in the world that do not have a national system for reporting job vacancies.

Happily, this is a problem already on the way to a solution. Beginning in 1968, the U.S. Department of Labor began to develop a computerized, job-bank system. Specifically, the Employment and Training Administration, U.S. Department of Labor, has since 1970 evolved a national job-bank

[1]Paul M. Ryscavage, "BLS Labor Force Projections: A Review of Methods and Results," *Monthly Labor Review*, U.S. Department of Labor (Washington, D.C., April, 1979), pp. 15-22.

[2]Ibid, pg. 17.

information system, linking state employment service systems in order to match jobs with applicants. This Job Service Matching System is a computer net now in operation which provides the basis for achieving its mandated function. It also provides the basis for sending current information on what skills are needed and where, to such potential consumers of such information as vocational schools and community colleges.

Charting such data obviously provides a sense of what the market is calling for in skill training. Just think of what such a computer net could do for educational planning if **all** firms over a certain size were to report each quarter on all current vacancies and projected two-year needs! Given the shortages of skills in many industrial and service activities, the chief beneficiary of such a system would be employers, private as well as public. Truly realistic use of our training and educational resources could produce numbers and types of skilled individuals for those firms forced to "make-do" with lower productivity alternatives. It is simply impossible for schools to plan effectively for training and education without such data, and it is equally impossible for us to provide a sufficiently trained labor force without such a rational education and training base.

In addition to developing such basic information on what education and training needs exist, employers must join with educators in order to enrich, expand and equalize the total program of career awareness, career exploration and career skill development. They must also come together if a realistic mechanism is to be established for career counseling for **all** students, whether college-bound or not.

Educator - Employer Cooperation

There is no doubt in my mind that such a close relationship, and responsibility, is necessary for several fundamental reasons. To begin with, educators must be honest and admit that only an employer can accurately describe a career and provide the necessary sense of excitement about what a particular line of work **really** entails. To the degree that employers are in a one-to-one relationship with potential trainees and students, you increase exponentially the sense of realism of what the job calls for and offers. Secondly, by getting employers involved in the career counseling process, the educational establishment increases the effectiveness of the training and educational process itself.

I am talking about the curriculum. There is no doubt in my mind that unless the curriculum is a continuous joint product of the educator and the business firm, it must eventually suffer in terms of its reality and applicability. At the university level, the best courses are given by faculty who spend some time working or consulting in the field about which they teach. Every vocational course or community college program should be designed jointly by the educator and the relevant industry consumer, and then be kept up-to-date by some effective mechanism. Such mechanisms could include consultancy arrangements with firms, a month-a-year "sabbatical" with a firm, or a really functioning industry curriculum review conducted once a year, on site.

Every vocational course or community college program should be designed jointly by the educator and the relevant industry consumer . . .

Ever since the late 1960's, I have felt the on-site visit to be crucial. I was then on the D.C. Youth Employment Commission and requested that business firms send representatives to our vocational schools to evaluate training programs. We found no electric typewriters in the office machine repair program and no air-cooled engines in the automotive repair program! Only on-site visits can spotlight such inadequacies in training

Relation of Training to Unemployment

Thus far I have been suggesting that by combining the natural self-interests of business and education, we can improve the basis for planning what we teach, relating it to market needs far more effectively, as well as providing more effectively for the placement of our students once they are equipped with the needed skills.

Though these are, I believe, significant suggestions and serve important needs of business and educational institutions, these suggestions do not deal with an area of mutual interest and development of even greater importance. The area of overriding common concern of business and education is **an adequate number of trained people to serve the needs of our economy.**

This country lacks a program which deals with the problem of labor force resources which are underemployed or unemployable because of lack of the skills called for by an advanced technological society. Few people seem to analyze properly the meaning of a 5 percent unemployment level during those periods when our economy is operating at what we consider to be levels of "full employment." For example, when in November, 1977, the level of unemployment was 7 percent, the Conference Board's index of help-wanted advertising reached an all-time peak. By 1977, the U.S. economy had recovered from the first OPEC recession. Though industrial output was at a high level, the unemployment rate was still 3-3½ per-

centage points above what would normally be anticipated for an almost completely recovered economy.

West German Program

In the March 13, 1978, issue of *Business Week* I made the point that the major industrial nations of the world have had a far superior record than we have had during the last ten years in the areas of employment, inflation and productivity. One of the major factors in the economic success of West Germany, for example, has been the industrial and government philosophy that the most critical resource to invest in is the labor force. Reflecting this philosophy, beginning in 1964, West Germany has provided, as a right to every adult, whether employed or unemployed, up to two years of full-time training or re-training. All training costs plus an income subsidy, which can be as high as 90 percent of the last wage, are covered. The income subsidy varies inversely with the last wage.

. . . the most critical resource to invest in is the labor force.

Thus a low-wage employee loses little income in upgrading his or her skills and increasing his or her productivity. A higher-paid worker will lose proportionately in income, thus guaranteeing there are no frivolous decisions to leave a job. The psychology works. Most people want to make more money rather than less. If they are given help to achieve this goal, they will do so. Those needing the most help but with the most to gain, are the low-paid workers. Hence, they are subsidized the most. But the economy gains the most by their becoming higher skilled workers. Moving allowances and short-term rental allowances to encourage moving where the good jobs are located are all included.

In 1971, based upon their evaluation of the West German employment and training program, the French adopted the same approach as did Great Britain in 1975. The British approach, called the Training Opportunities Scheme (TOPS), has a lower age limit of 19, thus permitting their old apprenticeship system to continue to operate up to that age.

The German, French and British systems depend upon different parts of the economy for training and education. In Germany and France, much is done through the private sector. In Great Britain, almost all is done through the public sector, with a strong reliance on technical colleges and government training centers. In West Germany and Great Britain, these programs were developed in a cooperative effort by industry, education and government.

British Scheme

It might be of interest to look at the TOPS program a bit more closely. The program started in 1975 and by 1978 had over 94,000 enrollees. Of this total, approximately 40,000 were females and 54,000 were males. The age distribution would place approximately 15 percent in the 26 through 29 age category, 14 percent in the 30-34 age category and 9 percent in the 35-39 years of age category. The remaining trainees were distributed in the under 26 and over 39 age categories.

In 1975, the trainees tended to lump themselves into four major categories of training. The largest category was clerical and commercial. This counted for approximately 35 percent of all training and was apparently training provided mostly for females. The next largest category was miscellaneous engineering and, as far as can be determined, was in essence junior mechanical trades. The next category was construction, accounting for about 10 percent of total training. Finally came an item which accounted for about 7 percent, called engineering production, basically semi-skilled production work in factories.

By 1978, however, the major thrust of training had changed. The major category now was that of highly skilled office services which included shorthand, typing, machine-use and executive secretarial training. The next category which was fairly close in numbers was metal-making and highly skilled engineering. These two categories, one probably female oriented and the other male oriented, accounted for approximately 30 percent of all trainee programs. But not far behind was office and clerical skills, probably somewhat more junior than the largest category. Some of the other categories in which sizable numbers of trainees were involved are rather intriguing. Management accounted for about 6 percent of all trainees, heavy equipment maintenance and driving accounted for about 6 percent, retailing and merchandising accounted for about 3 percent, welding accounted for about 4 percent, as did construction.

Training took place in four types of institutions of which three were major. First there were the skill centers, which were established prior to World War I by the British government and which have been used on and off during periods of emergency when large numbers of individuals had to be trained. The last time the skill centers were in major use was prior to and during most of World War II.

Second there were the employer establishments. These were training sites with programs geared not only to the needs of the employer at the work site, but also to skill needs which were general throughout the industry.

Finally, colleges were used to a great degree. These colleges were somewhat like the community colleges in our own country. In 1975, the major

source of training was the college center, second were the skill centers, and finally the employer establishments.

By 1978, there had been a tremendous increase in the number of individuals being trained at the employer establishments, but colleges still remained number one by far with approximately 50 percent of all trainees being trained at those colleges. The skill centers trained approximately 25 percent of all trainees.

A fourth center which has been used were those centers that have to do with the development of skills for driving heavy equipment. The number of such trainees has remained at about 5,000 between 1975 and 1977.

It is interesting to note the emphasis which has been placed on the use of college sites for training. When I conducted a study of the TOPS program in Great Britain several years ago, the point was made that the colleges were being looked to as a major source of training because of the intent not only to provide for skill training but also to provide as a basic component in the TOPS program what we would see as more fundamental aspects of education. This includes reading, computational skills and other types of courses which are concerned with adaptive skills.

With regard to stipends, trainees over age 20 and without dependents of any sort normally receive a stipend which is approximately $50.00 per week if living at home and slightly less if living at or near the training site where living costs may be subsidized. In addition, traveling expenses are paid if the training center is more than two miles from the home or lodging. Free midday meals are given, or an allowance in lieu of a free midday meal, in the event that those meals are not available. For those trainees with dependents, supplemental payments are made for each dependent. For those trainees who have been contributing to national insurance schemes, there is an additional payment made based on the length of payment into the national insurance program. The range of the stipends depending on age and number of dependents would go from approximately $50.00 a week to approximately $80.00 a week. To get some idea of where these stipends are with regard to average weekly gross earnings in 1977, the average gross earnings for a male worker were approximately $126.00 a week, while for the average female worker approximately $82.00 a week.

Japanese Approach

In Japan, the policy to upgrade continuously and retrain workers in order to achieve productivity gains is largely carried out within the large companies. Historically, the practice of lifelong employment has nurtured a policy of in-house recurrent education and training. Japanese workers don't constitute obstacles to innovative machinery or labor-saving techniques because they know two things. First, they will be retrained and up-graded for a different and more demanding job, and second, the innovation will enhance the competitive ability of the firm. There is, in reality, an assumed basic right to retraining and education in Japan which is an historical institution among the medium and large size companies.

Investing in the Labor Force

In the United States, we tend to see the unemployment problem as a sort of disguised welfare problem involving people who should be urged to use their bootstraps with minimal help from unemployment payments. We view workers as an asset as long as they are employed. They become a liability when unemployed, and we are reluctant to spend too much money on them, hoping instead that the economy will improve or that they will somehow find some sort of job.

Until we adopt an investment approach to our labor force . . . our unemployment rate will remain above acceptable levels.

We have had training programs, of course, but our expenditures have been slight when compared with the efforts of West German, French, and since 1975, British programs. We have not, since the GI Bill following World War II, provided both an adequate income supplement and a long enough period of training to do the job of maintaining a work force capable of supplying our advanced industrial and service sector needs. No U.S. administration has really considered the European experience. Our key policymakers are most often "educated" by economic advisers about the inevitability of the Phillips curve or use the "wet finger in the wind" approach to try to discern what is politically acceptable and will not cause them to be viewed as being too radical.

We continue to spend money during the hot summers to cool off human tinder. We spend money for public service jobs that can be done by functional illiterates or by workers who can read and write but have too few skills for the better jobs that are vacant in both the public and the private sectors. We perpetuate economic fraud!

Until we adopt an investment approach to our labor force and spend funds that are really adequate for a continuous upgrading of this key resource, our unemployment rate will remain above acceptable levels. Our $2,000 billion economy probably needs an ongoing training program that covers about 2 percent of our work force each year. What would this cost and could we sustain such costs? I think so, based upon recent expenditures for the CETA program. CETA budgets have been

in the $9-10 billion range during 1978-80. If we assume a combined training cost and stipend of $8,500 ($1,500 for training and $7,000 for stipend), the cost for 2 million trainees would be $17 billion per year. This exceeds the CETA level of expenditures, but bear in mind that the great majority of these trainees would ordinarily have received unemployment compensation. They would not receive such compensation while in training. During the period August 1978-July 1979, the total payments for unemployment compensation were in the neighborhood of $7 billion. Of course, a part of the $7 billion is compensation for short-term unemployed who do not need training. But the data available seem to indicate that a large proportion of the unemployed are individuals who are in low-level skills where periodic, frequent unemployment is a pattern of normal existence. And, of course, during the period these people are receiving unemployment benefits, they are receiving no training or education to upgrade skills or employment potential. As is well known, only about 30 percent of CETA funds are used for training. The bulk of CETA funds goes for public service jobs tailored to the low skill level of the recipients. It is thinly disguised welfare.

During periods of high unemployment, we should intensify our efforts to retrain rather than merely pay unemployment compensation to those whose employability will not improve without such training. Obviously, such training must include fundamental education if that is lacking.

Such a program would be modeled on the German and British systems, which in turn follow the pattern set by our own GI Bill program. It would provide payments and counseling to unskilled workers, but it would let them decide what sort of training they wanted and where they would get it. Private schools, public schools, and on-the-job training programs could then compete on the basis of efficiency.

A Productive Labor Force/A Healthy Economy

It will cost a great deal more than we are accustomed to spending for education and training to deal adequately with the problem of an effective work force. But as every successful businessman knows, you have to spend money to make money. Many of the industrial countries in Western Europe have learned that lesson with respect to their work forces, and their high economic performance has shown it. We have refused to learn from what they have done, and our low economic performance has shown it.

The time has arrived, I believe, for the employer, educator and union leader to join hands in developing a cooperative effort which guarantees the right of every worker to have an up-to-date skill and basic education, the availability of a consistently productive labor force for our industrial economy, and a form of employment security which is based upon a healthy economy and a trained labor force.

By Craig D. Musick

What Employees Need In Training and How to Promote Cooperation Between ASTD, AACJC and AVA

Employers are now spending some $30 to $40 billion annually on employment and training. This does not include the salaries and wages of those being trained.

The training function in business and industry has grown and grown. For example, the membership in the American Society for Training and Development has doubled in the past ten years because the employer is asking his/her trainer to get informed and solve training problems.

The sad part about these training costs is the fact that many of them appear in no one's budget, but rather in the form of low production, bad operations, poor quality and non-productive labor.[1] They are totally unaccounted for in terms of value received for dollars spent.

Major corporations have formal training programs for new employees. The major cost components of any training program are as follows:

1. The development of training
2. The delivery of training
3. The trainees' wages and benefits

However, if formal training is not present, on-the-job-training (OJT) takes place. In essence, training will take place: good or bad; formal or informal; structured or unstructured. Without good training, a poor work habit or job technique will become a lifetime work habit which will affect all phases of future operations.

Economics of Training

We must talk about the economics of training before we tackle the question of what we need in employee training. The following items can reduce training costs:

1. The reduction of training time
2. An increase in the competency of the trainees

A component cost of any training program is the non-productive time the trainee spends on a training program. Of course, clear cut job standards are required to establish bench marks for the new workers to meet. Any reduction of training time will bring a substantial return on investment.

Recently 60 representatives from Aiken County, South Carolina, gathered at the Aiken Technical College to discuss the college's role with industry in the coming decade. As chairman of the Aiken Technical College for the past 11 years and training director of the largest employer in the county, I see the problem from both sides.

Colleges, Industry Growing Apart

1. The technical colleges in South Carolina are trying to develop technicians (2 years) and skilled

[1]Peloguin, Jerome J., "Training: The Key to Productivity (or: How We Can Save the World from Capitalism)," *Training and Development Journal*, February, 1980.

craftsmen (1 year) for business and industry. This concept has been used in the state since 1962. However, corporations have been slow to accept the technician concept because they do not have such a slot in their salary administration plan and corporate structure.

2. Business and industry are spending their time, energy, and concern on entry level positions, plus retraining or upgrading the current employees, because of plant expansion and new industries moving into the area.

In summary, the colleges are spending their time and energy on selling and developing technicians. Business and industry are putting out fires, training entry level employees or upgrading employees because the "trained" employees have quit for a new industry.

Both units (college and industry) are training people but not working together. In fact, over the past few years they may have been growing further apart, technical colleges considering moving from 2 to 4 years, and industry down to entry-level operators.

What Industry Needs

What did the industry representative tell the college officials at the meeting?

- Provide placement service to students.
- Train more maintenance mechanics.
- Introduce use of computers into existing curriculum.
- Avoid diluting the college mission by expanding into nonessential fields.
- Continue to be available to meet any company's specific training needs through custom-designed programs.
- Make the college mission better known to industry and business.
- Train textile workers in entry-level skills.
- Institute a program of cooperative education to give students experience on the job.
- Enable faculty to go back to work in industry for short periods of time.
- Include training in the free enterprise system, interpersonal relations, and work ethics in all regular curriculum.

The group concluded that more cooperation is needed between technical colleges and industry. Industrial managers and executives would come and speak to the technical students, and faculty members would keep in touch with the industrial community by visiting plants and key officials.

Some Priorities

The report of the National Forum on *Learning in the American Future: Future Needs and Goals for Adult Learning, 1980-2000*[2] looks at employment, counseling, and training and gives them a moderately high to high ranking on both present and future goal priorities. Some priorities are as follows:

1. Rapid technological change makes it necessary to retrain productive workers whose skills have become obsolete.
2. Higher priority should be given to workers who are trainable and whose skills are in demand.
3. Government-subsidized job training programs (e.g., CETA) are preferable to welfare and unemployment, but not cost effective.
4. The private sector should assume the major responsibility for creating job opportunities for the unemployed.
5. The unemployed should assume more responsibility for their own training.

Ideas to Teach

1. Free Enterprise System

If you were to survey the top corporation executives about what course should be taught trainees at all levels, it would be the free enterprise system. However, the concept of marching them in a classroom while at college or on the job is not the solution to the problem. The free enterprise system has to be integrated in all college courses through creative instructing. Two such samples would be typing and automotive repairs. The typing instructor could explain the cost of typing a letter and what an error would cost the employer. Automotive students should understand the cost of parts, labor and cost to the customer.

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2. Environment Training

In the manufacturing/industrial area, new employees have rarely been exposed to the manufacturing environment. It is quite a culture shock for many new employees because they have never seen industrial machinery, equipment, hours, or people before. However, they have been exposed to other environmental areas as customers in banks, retail stores, or hamburger stands, so it is easy for them to be psychologically ready to accept employment and the business environment. But how do you train employees for the manufacturing environment? The simplest answer is on-the-job experience (OJE) while going to college, which could be designed into the curricula. The field of education does an excellent job of OJE through practice

[2]Glover, Robert, "Future Needs and Goals for Adult Learning, 1980-2000," *Report of the National Forum on Learning in the American Future*, November, 1979.

teaching. Students actually go out on the job teaching during their college training to practice what they have learned and to get adjusted to the teaching environment. Vocational, technical, and business colleges have tried to design some of this environment training through their shops and labs, but this does not replicate the true industrial setting. Cooperative education has been used with some success. Question: Would corporations allow OJE to take place if asked by the various occupation-oriented colleges? Yes, on a very limited basis or as trial projects.

3. Basic Skills

Since technical breakthroughs have really come to the forefront in the past 10 years, business and industry are spending many dollars training their own employees. Business and industry are looking for the entry person with excellent basic skills. What are those skills? (1) reading, (2) oral communications, (3) written communications, (4) basic math, and (5) mechanical ability.

Because of current and future funding problems for community colleges, the institutions may find it wise to limit their curricula and specialization for their students and customers — business and industry. It may be expedient for them to consider general programs which stress the basic skills required by local business and industry.

As the equipment becomes more specialized and costly, the community college may not be able to design specific courses of study.

4. Work Ethics

This subject depends on which side you listen to — employer or employee. The employer wants a "fair day's work for a fair day's pay." Employers ask, "Why are employees late to work, absent, careless, poor in attitude, low in production, and poor in quality?"

In a monumental book, *The Achieving Society*,[1] Harvard Professor David McClelland, describes four types of people living in America: (1) The takers, 27 percent of the population, have a goal in life to get something for nothing or take more than they are willing to give. (2) Members of the next group, 60 percent of the population, are called average. Their goal in life is to make it through the day and just get by. (3) The top two groups, 13 percent, are the winners. Their goal in life is to win, to succeed, to accomplish, to achieve and to enjoy life.

Why bring *The Achieving Society* into this paper? Because most executives and managers are the winners (13 percent), but their employees are just trying to get by (60 percent), or trying to get out of something (27 percent). The executives do not understand **why** these workers do not have the same goals, characteristics, and behavior they do.

. . . employers and employees need to be educated about work ethics.

Top management wants a **strong** work ethics program directed at school and college students to train them just as they themselves were trained 30 to 40 years ago. It should be noted that 40 years ago you either achieved or died. There was no welfare established at that time, and there were very few takers (27 percent). This explains the large communication gap between top managers and their employees.

A solution to the problem is not easy because both employers and employees need to be educated about work ethics. College advisory committees should see that work ethics and free enterprise are integrated into the curriculum.

RECOMMENDATIONS

How can ASTD and AACJC and AVA work together to solve some of the problems listed in this paper?

1. ASTD and AACJC and AVA should form a joint blue ribbon national committee task force.
2. The task force should take the recommendations from the Wingspread conference and develop a plan of action. The plan of action should have three or four pilot projects throughout the U.S.

ASTD has 114 chapters across the U.S. where community colleges are located and they could form sub-task forces. Local task forces could review the national action plan and contract or expand its objectives. Members of the local ASTD chapters would be great resources for community college advisory committees. The project would not cost a lot of money because it would be done locally, with minimal travel required. It should be noted that many community college faculty and staff members are ASTD members.

As pressures of federal and state regulations continue to mount, plus economic problems, the entire area of training will become more important. Trainers will be more accountable for maximizing return on investment. Along those lines the training function has moved away from the personnel department, with the training director reporting straight to top management. Because of costs and pressure from top management for results, we can expect industry to continue to do much of its own training.

[1]McClelland, David, *The Achieving Society*, The Free Press, 1967.

By Don C. Garrison

Community Colleges and Industry: A Stronger Partnership for Human Resource Development

This new decade of the 80's presents significant challenges to community colleges. Many economic and social prophets are now predicting major changes in our present way of life in America. The quality of life which the majority of Americans presently enjoys is seriously threatened as we enter the decade.

Here is the way Chase Econometrics Associates forecasts the 80's in a UPI news story in January of this year:

- Inflation will continue to be high, between 9 and 12 percent.
- Unemployment will peak at about 8 percent at the height of a recession this spring and summer.
- Unemployment and inflation will continue to rob households of their buying power.
- Short-term interest rates will drop about 5 percent and long-term interest rates will decline one to two percent during the next decade.
- Individual Americans will feel rising unemployment in different ways. Some skilled workers in affected industries will be laid off.
- The unskilled — particularly the unskilled in inner cities including teenagers and the elderly — won't get jobs.
- Energy problems will continue to fuel our economic woes.

Chase is not alone in these predictions. Almost every report all of us have read in the past couple of years contains prognostications like Chase's.

"The Southeast Economic Survey," a publication of the *Atlanta Journal and Constitution*, in January of this year contained this message:

> *Most economists believe that only by producing more efficiently can the average American worker obtain wage increases that will keep up with the rise in prices and thereby maintain or improve his standard of living.*

These questions have to be faced, and new expanded technology, along with its companion — training — will provide some of the solutions.

Paramount among the challenges and changes ahead for colleges is the fact that the birthrate in the United States has declined significantly over the past 18 years, with 28 percent fewer children being born now than were born in 1959. A given community or region, city or state will be affected to a greater or lesser degree by this statistic due to migration of the population, mobility, and related factors. The signal is clear, however, and we recognize that the availability to colleges of an increasing number of high school graduates will end early in the 1980's.

The past 20-year period represented golden years

when community colleges were established in large numbers, at an approximate rate of more than one a week in a period during the mid 60's. Termination of the Vietnam war catapulted enrollment of Vietnam veterans in the mid 70's, and this factor is still making a significant impact on today's enrollment. Vietnam enrollment, however, is now on the decline and, when considered with the birthrate factor, it becomes clear that it is not a buyer's market for the institutions of higher education today.

The Carnegie Council on Policy Studies in Higher Education predicted recently that college enrollment during the next two decades will shrink 5 to 15 percent. The Council also said, "It is quite likely the nation's 3,000 colleges and universities will suffer a downward drift in quality, balance, integrity, dynamism, diversity, private initiative, and research capability."

A strong growth in enrollment of women and expanding adult education represent a counter trend that may be a reason for the 2.6 percent increase in community colleges' opening enrollment this past fall (1979).

The primary reason I refer to this demography is to make it clear that, as community colleges face this new threat, we are now more eager to change emphasis and priorities and intensify community response. We are becoming more aware of the potential for responding to needs that heretofore we have either failed to respond to adequately or did not recognize or understand.

Many community colleges which have been almost solely transfer oriented are now launching non-transfer oriented, occupational programs and are looking to ways to better serve the business, industrial, and labor community. Also, stronger part-time credit and non-credit enrollments are evidence that some success in these efforts is being realized.

Roger Yarrington, vice president of the American Association of Community and Junior Colleges, reports that in 1965 14 percent of the 1.3-million students enrolled in community colleges were in occupational programs; whereas, in the 1979-80 school year, 52 percent of the 4.3-million students in community colleges are enrolled in occupational programs.

These statistics and trends are offered to make another simple point. The American comprehensive community colleges — over 1,230 in number — located in proximity to almost all Americans and committed to responding to local people and community needs — represent an almost immeasurable resource. These colleges possess a delivery system which has the local community orientation, the human and physical capacity, and the flexibility to respond to the many challenges which all Americans face in the 1980's.

Community colleges can and do change! We possess flexibility to change. A quick and simple comparison of student average age, sex ratios and full-time/part-time status as compared with 10 years ago will show that, indeed we change.

Many community colleges . . . are looking to ways to better serve the business, industrial, and labor community.

Community Colleges a Resource

Prevailing conditions as we enter this decade make it possible for the community college to contribute to meeting business and industrial needs and bring about a greater cooperation and contribution than ever before. Energy supply, inflation, environmental protection, economic development and competition, accelerating change, the increased complexity of everyday life, growth, fiscal constraints, and increase in crime rates represent a sufficient number of challenges.

Another challenge, the productivity question, ranks at or near the top of the present problems facing America. President Carter, in July of last year, told the nation, "The productivity of American workers is dropping and the willingness of Americans to save for the future has fallen below that of all other people of the Western world." American productivity must increase if we as a nation are to compete in the international marketplace and, in so doing, keep our economy strong and growing. Many have pointed to the utilization and implementation of new, advanced technology as a major part of the solution to the problem.

There is increasing use of new technology, and this is changing the work place. Some have pointed out that a lack of highly-skilled technicians who have the ability to deal with advanced technical processes stands as a major barrier against stronger capital investment and application of new sophisticated manufacturing technology. Technological breakthroughs will continue to change the world of work in the years ahead. Many jobs will become obsolete so quickly that people will not think in terms of career education but rather in terms of a lifetime of careers.

Changes in the work place will involve not only how the worker is trained for the job but how he maintains his capability to respond to the demands of his job. Skilled workers and technicians will have to be retrained a minimum of four times in their work years to meet the technological changes they will face.

The 1980's and 1990's to the year 2000 will dictate greater demands on education than heretofore. This point was agreed upon by 50 distinguished

persons, both in the United States and from overseas, who were interviewed as part of a research effort by the National Education Association to determine what America's education future to the year 2000 should be like. The 1918 American educational goals, "Seven Cardinal Principles of Education," were also examined as a part of the NEA's considerations. The 50 panelists concurred that the 1918 "Seven Cardinal Principles" were valid and suitable after 60 years, with minor exception.

Cardinal Principles

Vocational competence was one of the seven 1918 goals, or "cardinal principles." The NEA panelists noted in regard to vocational competence the following:

- Specific vocational skills are difficult to foresee in a changing society.
- A good general education is prerequisite to the vocational skills of the operating theater, supermarket, or factory.
- Lifelong learning is a vocational skill.
- There is a need to develop a new breed of workers who see their jobs in an ecological context.
- Occupational education must not lock people in the wrong jobs.

At the risk of overemphasizing the NEA's attempt to look at the future thrust of education in America, it is, in my judgement, important to consider points agreed upon by the 50 distinguished panelists and to offer nine of the twelve of these as needs to which community colleges must be committed today:

1. The need for education to develop a spirit of global community — of planned interdependence and dynamic reciprocity — which respects multiethnic and polycultural differences both in the U.S. and abroad
2. The need to make education a continuing, lifelong process
3. The need for flexibility in instruction and for emphasis on learning experiences rather than the route followed in providing them
4. The need to recognize that a wide range of performance is to be expected among learners, both young and old
5. The need to understand that students' aspirations and motivations are best served when learning is at least partly self-selected rather than solely dictated by teachers
6. The need for continuing education on a worldwide basis that would serve both mature (past 30) and senior (past 60) learners
7. The need to recognize that teaching and learning do not occur only in schools
8. The need to understand that occupational education should transcend vocational training and encourage greater versatility among members of the work force through better general education
9. The need for instruction in subject matter fields to instill an understanding of contemporary threats to the biosphere and emphasize socially useful service — by persons of all ages — in maintaining the biosphere and achieving a balance between humans and their environment

Post High School Training Needed

There is a present and continuing need for educational programs to produce the skilled manpower needed by business and industry. The fact that private employers invest well over $2 billion on employee education annually, with a greater portion of these dollars going into internal company courses, should make clear to community college educators the importance and necessity of education and training of the American worker as perceived by industry itself. The cited $2 billion figure would, of course, be substantially higher if the cost of wages and salaries paid to employees while learning were included.

The fact that private employers invest well over $2 billion on employee education annually . . . should make clear . . . the importance . . . of education and training . . . as perceived by industry itself.

Another factor which bears on the subject of productivity is that the plague of unemployment and underemployment in this country is nourished by the people who suffer the resulting ills of poverty and cannot find employment because they do not possess the skills demanded in today's available jobs. It is essential, however, that community college educators fully understand that our post-industrial American society of the 1980's demands initial and continuing job-work related learning if our exemplary standard of living is to be sustained. To fail to respond to this challenge could result in the children of the year 2025 living a replay of the simple life of the 10th Century and its low-technology life quality.

Simply stated, a major portion of the existing and new jobs being created annually dictate post-high school occupational education preparation for job entry and continued learning over a lifetime to maintain job skills to insure, in turn, increased productivity as technological change continues to mount.

What Does Education Offer Industry?

It has been pointed out earlier that the community college represents a community, state and

national resource which almost defies measure. Recognition of some of the components which make this true will contribute significantly to understanding what community colleges have to offer business, industry and labor.

1. Community colleges across America are as diverse as the people and the communities they serve. It is out of this diversity that we gain our strength and importance as a national resource.

Occupational education must be recognized as contributing to the generation of the economic health and wealth of the community, state, or nation. State and local recognition and mandates to the college are first steps toward assuring that the college responds to business and industry.

2. Structure and funding represent two more important elements which can make community colleges a resource to industry. I cite my own state, South Carolina, and our state/local technical education system as an example of this point. Presently, 6 of the 16 technical colleges are indeed comprehensive community colleges. The other 10 do not offer the A.A. and A.S. college parallel curricula. A major reason underlying the establishment to the system and its component colleges was to resolve the problem of outmigration of the greatest resource of the state, our young people, and to do that, new diverse industry would have to be attracted to the state. Industry had to be convinced that the capability existed to train the work force that it would need and then to retrain, upgrade, or update the existing work force over the years. The system was structured and funded to provide those functions.

According to a recent congressional study compiled by the Northeast-Midwest Institute, if the North wants to continue competing for manufacturing jobs in the future, it had better begin mimicking the South, especially its highly developed technical education system. The author of this report, Charlotte Short, said, "The biggest thing is that the South, while not perfect, is way above the others in putting together an effective system for industrial education." State financing has been provided since the inception of our South Carolina system to design and operate education/training programs to prepare, to industry's quality specifications and leadtime, the work force necessary to enable the new incoming industries and existing expanding industries to start up in the black and profit at the onset.

There are other contributing factors to the economic industrial growth record in South Carolina since 1962 when the TEC system was established. Short, in the congressional report, states: "The South's gain over the North in manufacturing employment over the past decade has not only been promoted by the favorable business climate of the South — including non-union membership and tax advantages — **but also by an unbridled eagerness by the southern states to train, at public expense, the workers needed for expanding or relocating industry.**"

The new growth record of new and expanded industry in South Carolina since 1962 is valued at $6 billion and has created 115,000 new production jobs. The 16 TEC colleges, like other community colleges in America, provide ongoing occupational-vocational-technical education programs assuring a continuing source of technicians and skilled craftsmen to business and industry. They also provide continuing technical education and lifelong learning programs in direct response to industrial needs. This three-point program of serving industry is: (1) special schools training for a new or expanding industry, (2) ongoing occupational programs to prepare skilled craftsmen and technicians to meet industrial and business future needs, and (3) continued upgrading and retraining programs to keep pace with changing technology.

South Carolina is further supported by over 50 new and modern area vocational centers administered by the secondary school system. These centers demonstrate the strong statewide and local commitment to serving industrial needs and contribute to maintaining a pro-business/industry environment throughout the state.

Economic health and wealth is important to all communities in America. Initiatives and commitments across America comparable to South Carolina's over the past two decades have been replicated in only a small number of states. The main point I wish to make in sharing the results of my own state is that a strong commitment from the state legislature, the governor, and the local government to make it possible to respond to industrial training needs from the onset establishes the necessary rapport and commitment for a strong industry-education relationship.

3. Community colleges command many resources. Among these resources are human, financial, and physical along with eagerness and flexibility to serve.

4. A given community college has the capability of generating the needed identity in the industrial/business community by determining the needs and responding to them. The identification of the community-oriented college as a great community and business-industry resource will in itself contribute to the maximum use of the college by business and industry.

5. Community colleges possess in most cases unique elements in American higher education. The elements are flexibility and adaptability. The flexibility and adaptability are mirrored in the hundreds of different occupational programs offered in community colleges across the nation and even within some states. Paramount among

these programs are the following:

- Co-op education in many occupational fields
- Apprenticeship programs
- Continuing-lifelong educational programs tailored to specific industrial and employee needs
- Flexible and individual scheduling of courses at times convenient to industry and students
- Developmental education and GED programs, many of which are offered at the site of a given industry
- Comprehensive Education Training Act (CETA) programs to meet specific occupational requirements in the community (available in many community colleges presently)
- Special programs designed to meet a specific need of a specific employer

6. Community colleges provide instructional programs at the lowest possible cost — low cost to the student and low cost to the business or industry which is providing financial support. This is true if considered on a tuition reimbursement basis or contractual basis with the community college. In our state, as is the case with the few states which provide special training programs for new and expanding industry, these services are free to the industry.

These six elements represent, in broad terms, the main framework within which the community college can or should operate. The resource of the community college, made possible largely because of the tax dollars that industry, business and their employees pay, is capable of contributing to industry's ability to produce, to profit, and to maintain corporate health.

Recent Experiences

A brief description of some of the most recent experiences which we have had at Tri-County Technical College in response to industrial needs:

1. A major textile corporation in our service area contracted with the college to provide an on-campus, week-long, instructional program to make all of the company's front-line supervisors more aware and understanding of the importance of industrial engineering to the success and productivity of the company. Twenty-eight week-long sessions were required to move all of the supervisors through the course. This is continuing on a quarterly basis for all newly-appointed supervisors. The corporation paid all tuition, as well as trainee food and lodging expenses at a nearby hotel.

2. We are presently in the process of operating or developing learning programs for 9 of the 25 new or expanding industries in our three-county service area.

3. Early in January, 1980, a major textile corporation with 5 large plants within our service area contracted with the college to provide on-campus, pre-supervisory training to those persons they select as supervisory candidates. These employees will be compensated at their regular rate of pay while on campus and away from their production jobs two days of each week. At the same time they will earn more than 15 hours of credit during the three quarters they will be in the program. All credits earned can be applied to the associate degree in the textile management program offered by the college.

4. An in-plant management development program was initiated in 1972 to aid industry in upgrading its supervisory personnel. The most popular ingredient of this program has been the in-plant courses in which managers at all levels receive instruction in their own plant and, quite often, while on the job. Enrollment in the management development programs to date exceeds 4,500 students with an average of 10 contact hours per student. One corporation alone had a total of 17,000 hours of instruction for its supervisors.

5. A maintenance mechanic program was initiated as a result of one of the regularly scheduled visits to major business and industrial sites. These visits by the president, and continuing education dean, the director of in-plant training, and the industrial services representative provide opportunity to communicate at the executive level what the college provides to industry and the college's purpose and desire to serve industry. The industrial services representative is a major position funded by the state for use by the college. This person visits industry daily to identify training needs and does follow-up with appropriate personnel of the college. One such visit to a Michelin tire plant employing more than 1200 persons along with visits to three other major plants opened in the state since 1975 resulted in the implementation of the maintenance mechanics program at Tri-County Technical College to meet a specific need of Michelin and the other plants. Other major industries have employed graduates of the program and a majority of the 16 TEC colleges in the state now offer the same program.

6. An associate degree textile management program was established in 1973 to respond to a need of the textile manufacturing industry. Since its inception, the industries have jointly made available each year scholarships covering full tuition and book expense to more than 50 students. This is possible because of a close working relationship with a very active advisory committee. Presently, architects are designing a $5.5 million textile training center for the campus to expand the program and house the new high technology equipment which the majority of the industries are now acquiring.

The preceding examples of recent experiences of one college are replicated across America by community colleges which have a strong commitment to serve business and industry. The important

factor here is that we all possess the institutional capability to serve industry and business. A genuine desire and commitment of state leaders, college trustees, administration and faculty represent the first necessary element in the success formula.

Another necessary element in this success formula is equally critical. Cooperation is a two-way street.

What Do Community Colleges Need From Industry?

The first requirement which we need from business, industry, and labor is mutual trust. Business and industrial leaders must be willing to trust the community college. They must give the college the opportunity of responding to training needs that have been identified.

. . . industrialists must be willing to give of their time by involving themselves, and their key employees, in the affairs of the college.

Industries which have located in our state in the past 20 years began to develop an understanding of our capabilities to provide training even before deciding to locate in South Carolina. Letters on file and included in TEC publications point out very clearly that the services provided by TEC play a key role in the final decision of most firms to locate in South Carolina.

Past actions and performances of the college do affect industry's attitude toward the college in this area. There are cases, to be sure, and my own college is included, where community colleges have failed to recognize industrial needs, and industry has gone its own way. Likewise, there are cases where industry has extended to colleges the opportunity, and the colleges, for whatever reason, have failed to do the job required.

A second requirement is that industrialists must be willing to give of their time by involving themselves, and their key employees, in the affairs of the college. This is accomplished in many ways. One of the important ways is by representing their companies on advisory committees of the college. These committees evaluate curricula and keep training relevant to employer needs. They formulate cooperative education programs and apprenticeship training. They explore equipment requirements, and, of primary importance, they help place graduates.

A third area in which industry can play an important part is with respect to equipment. Over the past two to three years the colleges of the South Carolina TEC system have found it increasingly difficult to acquire the new, advanced technological equipment which is mandatory to maintaining our "hands on" training. The biggest problem facing technical community colleges is the rapid advance of technology itself.

G. William Dudley, director of South Carolina's TEC program said:

> *TEC is now faced with the difficult problem of meeting the technical needs of industry today. Today, a maintenance mechanic must have an understanding of a wide range of skills, including electronics, hydraulics and a fundamental familiarity with computers. We must stay on the cutting edge of technology somehow. Keeping our teachers current is one solution, but finding the funds to buy the types of sophisticated equipment needed today can be troublesome. The first time you talk to a prospect he may be interested in X product, but when you see him a year later, he is talking about Y because X is antiquated. Things are changing so fast. Before we were talking about buying a lathe for $5,000. Now it's computer graphics — that's what we have to deal with.*

In our state each TEC college scheduled on-campus listening sessions for industrial, business and community leaders and representatives to express to the college what we should change, emphasize, or do differently in the future to render the services they desire now and throughout the 1980's. The response was most gratifying and provided a wealth of information for the task force and subcommittees to use in developing the "Design for the Eighties." This design will be acted upon by trustees of the TEC college and the state TEC board and will be submitted to the General Assembly and governor for action and funding. A million dollars appropriated to this project in the current FY80 will be used to fund presently known, high priority equipment needs.

The participation of industry in developing the design constitutes the cornerstone of the total project. In our case at Tri-County Technical College, 58 specific recommendations from industry resulted.

A fourth requirement is that industry must be willing to engage in co-op and apprenticeship programs and to open its plants to tours and field trips by the college.

Other ways in which industry can be involved in the community college process are by promoting and communicating the programs of the college, making guest speakers available, awarding specific scholarships, and contributing to the general scholarship fund of the college and to its foundation. These are examples of ways industrial leaders can help the college respond to the many educational and training needs of industry while providing a

better life for their employees.

Other Ways of Assisting

Other ways industry can assist community colleges are:

- Industry can provide the local community college the information needed for program justification, content, and termination. This information — such as turnover rates, employment projections, job classifications, etc. — can be provided to the college through advisory committees, college surveys, and college industrial services representatives. For example, my college conducted a comprehensive employer needs assessment last year that involved 94 percent of the major industries in the area along with 250 selected small businesses.
- Industry must communicate to education specific competencies, or skills and knowledge which graduates of specific occupational programs must possess.
- Industry must provide objective, candid, positive criticism to education as the college follows up on its graduates.
- Industries must speak to the community on behalf of the college, relating how the college is responding to their needs and to the needs of their employees. This communication, for example, can be via public service radio and television programs and announcements. Similarly, industry can provide invaluable support by providing letters which can be included in the annual report of the college, by taping testimony to be used in budget presentations, and by communicating directly with elected officials and membership of organizations and governing bodies which formulate decisions, approve building projects, and affect the future ability of the college to accomplish the job of serving industry.
- Industry must stay in regular contact with the college placement office and participate in job fairs as scheduled by the college. The college placement office and directors of specific occupational programs at the college rely heavily on industry advisory committees to place and employ graduates.

RECOMMENDATIONS

In conclusion, it is recommended that:

1. A joint AACJC/AVA/ASTD project be initiated which would enbrace as major objectives the following:

- Examination of the present state of the art in assessment of student competence in secondary vocational institutions and community colleges so that a better understanding of the importance, the philosophy, and state of the art be achieved. A better understanding and response by education to industry would result. An assembly regarding assessment could be one result or activity of such a project.
- Development of a model curriculum design in a major vocational/technical discipline (example: electricity-electronics) which would recognize expected exit skills at points on a progression line from entry at the secondary vocational school to the highest associate degree community college level. This model could then be adapted to other programs. The model would be a competency-based rather than a traditional time-oriented model.

2. Industry initiate a nationwide media program promoting vocational/technical/occupational education at vocational centers, technical institutes, and community colleges.

3. Industry and business initiate tuition refund policies for students enrolled in occupational programs related to their jobs if such policies do not now exist.

4. ASTD urge industries to advertise their tuition reimbursement policies and encourage employees to take advantage of them at their local community college or technical institute.

5. ASTD promote vigorously formal agreements and procedures by which college credit for in-plant training programs would be awarded by the local community college and applied to a related occupational education program.

6. Community colleges and area vocational schools employ full-time occupational faculty to teach in industry to meet specific needs and as a response to increasing needs for better trained workers.

7. The assembly recognize the importance of a position at the colleges which reports to the chief executive officer and has the responsibility of visiting on a regularly scheduled basis the business and industrial establishments in the community to determine training needs and to maintain daily direct personal lines of communication between industry and the college.

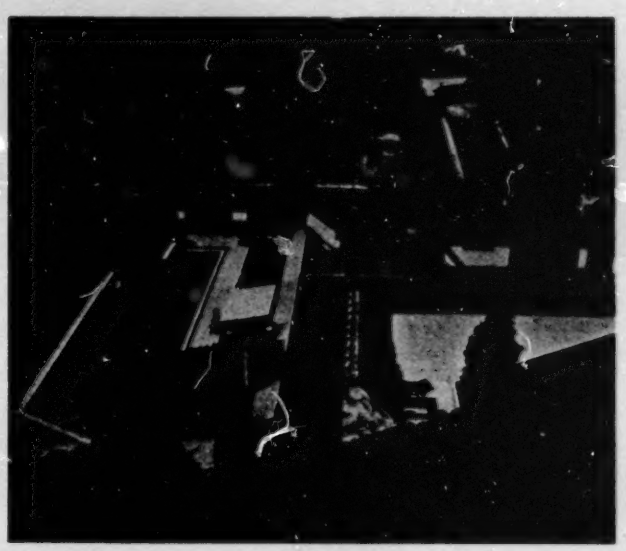
8. The "quality issue" regarding the expectations by industry of the graduates of occupational vocational programs be addressed in future AACJC/AVA joint activities. This subject might be addressed in a future assembly.

9. Careful consideration be given to conducting a major study to analyze the economic importance and impact of occupational, vocational, technical education on a given community.

* * *

Community colleges and vocational schools represent a substantial portion of the national wealth. The more these educational institutions are used to serve the needs of the people, business and industry, the greater the contribution they can make to reducing the severity of a number of present problems, including energy, productivity, and our ability to compete in the international marketplace.

Report of the 1980 Wingspread® Assembly



The 1980 assembly met on March 12-14 at Wingspread, the distinctive Frank Lloyd Wright-designed educational conference center of The Johnson Foundation in Racine, Wisconsin, which is devoted to the free exchange of ideas. The theme of the assembly was *College-Industry Cooperation in Employee Training to Increase Productivity, Reduce Unemployment and Combat Inflation.* The following statement, incorporating recommendations of various groups, was drafted by Gwen Gibson of the American Society for Training and Development. It was reviewed by assembly participants at the final session and is presented here for further study, discussion and action.

• • •

The need for closer and better working relations among business, industry and education — as one means of improving productivity and reducing unemployment — has long been recognized. But it was not until the 1980 Wingspread assembly that officials of three leading organizations, representing the worlds of work and education, convened to develop new, joint approaches to the training, retraining and education of the nation's work force.

A national policy for human resource development was the key proposal to emerge from the assembly. A White House conference was suggested as the means to draft such a statement. The statement should proclaim that lifelong training and education of the American work force is essential to the health of the national economy.

The projected White House Conference was seen as a means of drawing attention to the myriad other recommendations made by the 60 participants in the 1980 Wingspread assembly.

Among other things, these called for:

- Closer collaboration, communication and sharing of research and resources than ever before by the three participating associations — the American Association of Community and Junior Colleges, American Society for Training and Development and American Vocational Association
- Inquiries to other concerned associations — such as the Chamber of Commerce, the National Alliance of Business, the AFL-CIO, and others — to determine their interest in participating in joint projects aimed at developing the nation's human resources to the fullest
- New data-collection projects and surveys to determine on a local, state, and national basis what the job market is today and what it will be in the future so that more meaningful education and training programs can be designed
- The identification of several model projects in which industry, education, labor and

other segments of the community are working together successfully to provide training, increase productivity and improve the quality of work life for the individual

• A concerted effort by AACJC, ASTD and AVA to involve the new U.S. Education Department more actively in promoting communication between education and industry

The first-of-its-kind Wingspread conference on industry-education cooperation was first proposed by a liaison committee representing AACJC and AVA. The educational associations felt it was essential to include ASTD which represents human resource specialists in business, industry, government, and labor. ASTD was invited and immediately accepted, and The Johnson Foundation agreed to host the assembly.

Willard Wirtz

Keynote Speaker

Keynote speaker at the opening session on Wednesday evening, March 12, was Willard Wirtz, former Secretary of Labor and now chairman of the board of the National Manpower Institute. Wirtz had six suggestions for the participants as they embarked on their new collaborative efforts:

1. Involve more women's, minority and labor groups to make this partnership "more effective and complete."

2. Relate any aspect of community college — or institutionalized — education "to the rest of the adult learning process."

3. Recognize that worker input alone is not responsible for the lagging productivity growth rate but that management and the advancing technologies are equally involved.

4. Balance occupational training with a sense of the right of the individual "to a fulfilling, rewarding life."

5. Remember that "the individual is an end, industry is a means."

6. Think big, not small.

"We think small if we think solely in terms of the interest of colleges and industry in formulating training," Wirtz said. "We think big if we understand that we are facing the ultimate test of the free society — whether it can deal with the stresses of scientific invention without losing sight of the human purpose."

Wirtz was the sole speaker at the 1980 assembly. Background papers had been presented earlier by: Herbert E. Striner, dean of the College of Business Administration, American University, Washington, D.C.; Craig Musick, training director, Graniteville Company, Graniteville, S.C., and president of ASTD; and Don C. Garrison, president, Tri-County Technical College, Pendleton, S.C., and a member of the AACJC board of directors.

RECOMMENDATIONS

On Thursday, March 13, the Wingspread participants discussed the background papers, then drafted their own recommendations. To do so they met in four work groups, sometimes breaking off into smaller groups. When the facilitators read the recommendations of their respective groups before a general session Thursday night, a remarkable consensus was evident about the need for a national policy on human resources, for more collaboration among concerned associations and for an accurate, up-to-date data bank, national in scope but local in purpose, on the present and future job market.

New National Policy

In recommending a new national policy, Group One, headed by Curtis Johnson, president of Minneapolis Community College, endorsed the "investment" approach proposed by Herbert Striner in his background paper. Striner's position, in essence, was that continuing education and training of the labor

force — or human resource development — is an absolutely necessary investment in the nation's future.

Group Two, with Paul Chaddock, director of planning and development for the Dayton Hudson Corporation, Minneapolis, acting as facilitator, prefaced its recommendation with a statement that noted, in part:

"We are in a post-industrial, high-technical, rapidly changing society . . . To meet the needs of that society . . . there must be a national commitment to continuing education programs for occupational upgrading, retraining, or advancement, with shared financing by government, industry and individuals. There must be a national commitment to methods of instruction and delivery, such as competency based instruction which will permit access and articulation among post-secondary, secondary, military, labor and industry systems."

Group Three, led by Charles D. Whitehead, president of the American Vocational Association, said:

"There is a need for a workable national policy that addresses human resource development and increased productivity. In the absense of a national disaster to stimulate such a policy, alternative means for its development must be explored."

Group Four, working with Roni Posner, AVA's director of planning and development as facilitator, said:

"The three associations (AACJC, ASTD, AVA) should work toward a national policy on manpower that would provide for greater investments in worker assessments and training — investments that would have long range benefits, as opposed to current public service, band-aid approaches."

In each set of recommendations, there was an underlying concern about the adequacy of CETA training programs (which Striner had dubbed as "thinly disguised welfare").

One group complained during discussions that federal funding regulations, i.e. those under CETA, often preclude the establishment of effective training programs.

It was generally agreed that any new national economic policy should emphasize training programs for the unemployed and should reject any level of real or involuntary unemployment.

Closer Collaboration

Recommendations concerning closer collaboration — to compile the work of the four groups — included these:

- Community college presidents should arrange and initiate meetings with representatives from ASTD's 114 chapters. ASTD and AACJC should provide the college presidents with lists from which to work.
- Community colleges should identify a "BIL" liaison person to work with local business, industry and labor on educational programs.
- AACJC and AVA should invite ASTD to serve on their liaison committee. Key federal staff should also be invited to participate on this committee.
- The three associations (AACJC, ASTD, AVA) should encourage the new U.S. Education Department to educate the states concerning manpower problems and to act as a mediator in improving relations between education and business/industry.
- The three associations should promote the types of learning systems which combine in-school classroom instruction and on-the-job learning experience.

Data Collection

On the subject of data collection, each of the four groups saw the need for an assessment of what's already happening around the country in terms of cooperative efforts between the worlds of work and education. Each group said successful models should be identified and studied so that policy makers could determine "what characterizes a successful project and how it can be replicated." Their recommendations included these:

- A survey of the "state of the art" should be conducted by an appropriate, already existing organization, such as the National Center for Research in Vocational Education at Ohio State. Such a survey should be overseen by a task force and field tested by community colleges and ASTD chapters.
- Knowledge about productivity, quality of work life, work ethics, and the changing work force should be collected and disseminated through an extensive network of workshops and other educational activities.
- A series of four or five demonstration projects should be developed, based on a co-

operative relationship among industry, education and labor. AACJC, ASTD, and AVA should jointly plan and guide the projects. The objectives would be to establish closer relationships among industry, education and labor, to identify areas of strong mutual interest and to demonstrate the effectiveness of this collaboration by cost comparisons, evaluations and follow-up. The benefits would include: the identification of present and future job vacancies, the tracking of technological developments and development of relevant training, the monitoring and identification of the changing demographics of the work force and the establishment of educational programs for individual career advancement.

Roni Posner's group produced the most detailed recommendation in the data-collection category. It called on AACJC, ASTD and AVA to design jointly and "get funded and staffed" a three-part Needs Assessment Program (NAP).

Part one of NAP would involve the collection and synthesis of data on the following topics: successful, existing model projects; institutional organizational structures; information systems; data bases and job markets; institution-employee relations; employment demographics; task analyses; competency based curriculum; technology partnerships; personnel exchange; staffing; student recruitment; shared facilities; student counseling/assessment systems; delivery logistics; job placement; follow-up; articulation.

Part two of NAP would involve the packaging of this information, perhaps in a manual. Part three would cover dissemination of the newly collected data.

Glossary of Terms

Two recommendations called for the compilation of a glossary which would help the general public to better understand the terms, or jargon, used by human resources specialists. For instance, it was said, productivity is defined by management as "worker output" and by labor as "the exploitation of the worker." In fact, said the Wingspread participants, "productivity should stand for both organizational and individual development."

Quality of Work Life

Like Wirtz, the Wingspread participants expressed a concern for the quality of work life. Their recommendations in this regard said:

- Any commitment (to a national human resource policy) must recognize vocational education as one part of the lifelong learning process — not an end in itself.
- Training and education should prepare students not just for jobs but for rewarding careers.

Special Groups

Each of the four groups also recommended that any new national policy take into account the needs and problems of women, minorities, handicapped, socially and economically disadvantaged and older persons in the work force.

* * *

At the final session, it was agreed that AACJC, ASTD, and AVA should publish and actively work toward the implementation of the above recommendations.

Accordingly, the chief elected officers of the three associations agreed to the following statement:

We are pleased that the chief elected officers of AACJC, ASTD, and AVA all participated in the assembly discussions. We express our support for the above recommendations and encourage our organizations to implement them aggressively. We will work together to make these initiatives reality.

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Costa Mesa, California
(Chairman, AACJC Board of Directors)

Craig Musick, Training Director
Graniteville Company
Graniteville, South Carolina
(President, ASTD)

Charles Whitehead, President
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WINGSPREAD

The building Frank Lloyd Wright called Wingspread, situated on a rolling prairie site just north of Racine, Wisconsin, was designed in 1938 as a residence for the Johnson family. In 1960, through the gift of Mr. and Mrs. H. F. Johnson, it became the headquarters of The Johnson Foundation and began its career as an educational conference center.

In the years since, it has been the setting for many conferences and meetings dealing with subjects of regional, national, and international interest. Wingspread has now become a national institution devoted to the free exchange of ideas.

The rolling expanse of the Midwestern prairies was considered a natural setting for Wingspread. In the limitless earth the architect envisioned a freedom and movement. The name Wingspread was an expression of the nature of the house, reflecting aspiration through spread wings — a symbol of soaring inspiration.

The Johnson Foundation encourages the examination of a variety of problems facing the Midwest, the nation, and mankind. In the belief that responsible analyses and proposals should reach a substantial audience, The Johnson Foundation assists in the publication of various papers and reports. Publication, of course, does not imply approval.

Additional copies of this report may be obtained from The Johnson Foundation, Racine, Wisconsin 53401, or The American Association of Community and Junior Colleges, One Dupont Circle, N.W., Suite 410, Washington, D.C. 20036.

During the Wingspread meeting on "Employee Training for Productivity," two radio programs were recorded for The Johnson Foundation's public affairs radio series "Conversations from Wingspread." 1. **Employment in the United States,** a talk with Willard Wirtz. 2. **Industry and Education,** a conversation with Craig Musick and Herber Striner. These programs in cassette form are available from The Johnson Foundation, Racine, Wisconsin 53401.

Editor for The Johnson Foundation, Henry Halsted, Vice President-Program; Conference photographs by Jim Wend and Tom Anger.

June 1980

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